



**[6450-01-P]**

**DEPARTMENT OF ENERGY**

**10 CFR Parts 433, 435 and 436**

**[Docket No. EE-RM/STD-02-112]**

**RIN 1904-AC13**

**Green Building Certification Systems for Federal Buildings**

**AGENCY:** Office of Energy Efficiency and Renewable Energy, Department of Energy.

**ACTION:** Final rule.

**SUMMARY:** The U.S. Department of Energy (DOE) issues a final rule that implements a provision in the Energy Conservation and Production Act, as amended by the Energy Independence and Security Act of 2007, which requires DOE to identify a green building certification system and level that DOE determines to be the most likely to encourage a comprehensive and environmentally-sound approach to certification of green buildings. DOE's green building certification system review must be based on the General Services Administration's review of third-party green building certification systems and levels and criteria outlined in the Energy Independence and Security Act of 2007. Under the regulations established today, if a Federal agency chooses to use a green building certification system for a new building or major renovation covered by today's rule, the green building certification system for Federal buildings must meet the certification standards established in today's rule.

**DATES:** This rule is effective [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. The incorporation by reference of certain publications listed in this rule was approved by the Director of the Federal Register on [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** This rulemaking can be identified by docket number EE-RM/STD-02-112 and or RIN number 1904-AC13.

Docket: The docket is available for review at <http://www.regulations.gov> including *Federal Register* Notices, public meeting attendee lists, transcripts, comments and other supporting documents/materials. All documents in the docket are listed in the <http://www.regulations.gov> index. However, not all documents listed in the index may be publicly available, such as information that is exempt from public disclosure.

For further information on how to review materials in the docket, contact Ms. Brenda Edwards at (202) 586-2945 or e-mail [Brenda.Edwards@ee.doe.gov](mailto:Brenda.Edwards@ee.doe.gov).

**FOR FURTHER INFORMATION CONTACT:** For technical issues, contact Sarah Jensen, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Federal Energy Management Program, EE-5F, 1000 Independence Avenue, SW, Washington, DC 20585-0121, (202) 287-6033, e-mail: [sarah.jensen@ee.doe.gov](mailto:sarah.jensen@ee.doe.gov). For legal issues, contact Ami Grace-Tardy, U.S. Department of Energy, Office of the General Counsel, Forrestal Building, GC-71, 1000 Independence Avenue, SW, Washington, DC 20585, (202) 586-5709, e-mail: [ami.grace-tardy@hq.doe.gov](mailto:ami.grace-tardy@hq.doe.gov).

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## **I. Introduction**

### **A. Background**

Section 305 of the Energy Conservation and Production Act (ECPA; Pub. L. No. 94-385) established energy conservation requirements for Federal buildings. (42 U.S.C. 6834) Section 433(a) of the Energy Independence and Security Act of 2007 (EISA 2007; Pub. L. No. 110-140) amended section 305 of ECPA to require, among other things, DOE to identify a green certification system and level for rating Federal buildings that DOE determines to be the most likely to encourage a comprehensive and environmentally sound approach to such certification and rating. (42 U.S.C. 6834(a)(3)(D)(i)(III)) Section 433 of EISA 2007 also revised the definition of “Federal building” applicable to the regulations for Federal buildings. (42 U.S.C. 6832(6))

DOE’s green building certification system review must be based on the General Services Administration’s (GSA) review of third-party green building certification systems and other criteria outlined in EISA 2007, including: the ability and availability of assessors and auditors to

independently verify the criteria and metrics; the ability of the applicable certification organization to collect and reflect public comment; the ability of the standard to be developed and revised through a consensus-based process; and an evaluation of the robustness of the criteria for a high-performance green building; national recognition within the building industry (42 U.S.C. 6834(a)(3)(D)(iii))

As required under EISA 2007, at least once every five years, GSA must conduct a study to evaluate third-party green building certification systems and levels taking into consideration these same criteria. (42 U.S.C. 6834(a)(3)(D)(iv)) After completion of each study, DOE must review and update its recommended certification systems and levels, taking into account GSA's evaluation. (42 U.S.C. 6834(a)(3)(D)(i)(III)) By rule, DOE also may allow Federal agencies to develop their own internal certification processes. (42 U.S.C. 6834(a)(3)(D)(v))

As required by Section 436(h) of EISA 2007, in 2008 GSA identified the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Silver as a green building certification system and level that meets the criteria expressly identified in the statute. In the 2011 sustainable design notice of proposed rulemaking ("sustainable design NOPR") DOE requested comment on other green rating systems and associated levels/points that also would meet the statutory criteria. *See* 75 FR 29933, 29938-39 (May 28, 2010).

On October 25, 2013, the GSA Administrator sent his latest green building certification system evaluation to DOE.<sup>1</sup> The Administrator recommended that Federal agencies utilize the

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<sup>1</sup> Letter from Daniel Tangherlini, GSA Administrator, to Ernest Moniz, Secretary of Energy, dated October 25, 2013. Letter and all supporting material may be found on GSA's website at

2009 LEED<sup>2</sup> or the Green Building Initiative's Green Globes 2010<sup>3</sup> certification system. For new construction and major renovations, GSA recommended that Federal agencies obtain at least a LEED Silver rating, or, if using Green Globes, at least 2 Green Globes.

Today's rule updates the Federal energy efficiency standards by adding criteria that green building rating systems must meet. Federal agencies are not required to use a green building rating system, but if they choose to do so, the systems must meet these criteria. The Federal commercial and multi-family high-rise residential energy efficiency standards are contained in 10 CFR part 433. The Federal low-rise residential energy efficiency standards are contained in 10 CFR part 435. Today's rule adds the green building certification criteria for both 10 CFR part 433 and 10 CFR part 435. Today's rule also reorganizes and renumbers existing text in these parts to accommodate the addition of the provisions regarding green building certification systems for Federal buildings.

## **B. Summary of the Final Rule**

In May 2010, DOE published a notice of proposed rulemaking (NPR) that addressed the use of sustainable design principles for the siting, design, and construction of Federal buildings, and the use of water conservation technologies to achieve energy efficiency. This proposed rulemaking also provides criteria for identifying a certification system and level for green buildings that encourages a comprehensive and environmentally-sound approach to

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<http://www.gsa.gov/portal/content/131983>.

<sup>2</sup> LEED information is available at <http://www.usgbc.org/leed>.

<sup>3</sup> Green Globes information is available at <http://www.thegbi.org/green-globes/>.

certification of green buildings. 75 FR 29933. Today's rule finalizes only the provisions of the NOPR that pertained to green building certification systems. DOE is continuing to assess the sustainable design principles in the NOPR in light of an ongoing process to revise the 2008 Guiding Principles for High Performance and Sustainable Buildings: New Construction and Major Renovations (Guiding Principles), which served as a basis for those provisions of the NOPR.

DOE recognizes the degree to which EISA 2007 requirements for Federal agencies to incorporate sustainable design principles into new construction and major renovations overlap with standing Executive Order requirements that agencies maintain specific sustainable building standards. Executive Orders 13423 and 13514 require that all new Federal construction and major renovations comply with the Guiding Principles. Although using a green building certification system is optional, DOE recognizes that many agencies use green building certification systems to assist them in supporting efforts to comply with the Guiding Principles.

Under today's rule, if an agency chooses to use a green building certification system, agencies must choose a green building certification system that meets certain criteria as discussed below and agencies are encouraged to take into consideration GSA's set of recommendations. DOE made one change to the "green building certification system" criteria from the NOPR by requiring a verification system for post-occupancy assessment of the rated buildings to demonstrate continued energy and water savings at least every four years after initial occupancy.

This rule applies to certain new Federal buildings, and major renovations to Federal buildings, for which design for construction began on or after October 14, 2015. The new Federal buildings, and major renovations to Federal buildings covered by today's rule are covered by EISA 2007 and include new Federal buildings, or major renovations to Federal buildings, that are also: (1) public buildings, as defined in 40 U.S.C. 3301 for which a transmittal of a prospectus to Congress is required under 40 U.S.C. 3307; or (2) Federal buildings for which the construction cost or major renovation cost is at least \$2,500,000 (2007 dollars, adjusted for inflation). The term "Federal building" means any building to be constructed by, or for the use of, any Federal agency. The term includes buildings built for the purpose of being leased by a Federal agency, and privatized military housing. (42 U.S.C. 6832)

## **II. Discussion of Comments and Changes to the Final Rule**

DOE received a wide variety of comments from 62 different entities in response to the sustainable design NOPR. All of the 62 comments supported the general premise of this rule to improve sustainability in Federal buildings. All public comments are available for review on the regulations.gov website under Docket Number DOE-EERE-OT-2010-0007. Comments that are directly pertinent to the green building certification system portion of the rule are discussed and addressed in greater detail below.

### **A. Scope**

### *Leased buildings*

EISA 2007 modified the ECPA definition of “Federal building” to apply to “any building to be constructed by, or for the use of, any Federal agency. Such term shall include buildings built for the purpose of being leased by a Federal agency, and privatized military housing.” (42 U.S.C. 6832(6)) In the NOPR, DOE requested comments on the proposed definition of “new Federal building” (based on the statutory “Federal building” definition) and on limiting the inclusion of leased buildings in the definition of “Federal building” to new leased buildings in which a Federal agency has significant control over the design of the building (e.g., “lease-constructs”). 75 FR 29934.

Several commenters, including Indian Health Services (IHS) and the U.S. Green Building Council (USGBC), agreed with DOE’s proposal to limit the coverage of leased buildings to those in which a Federal agency has “significant control” over building design. (IHS, No. 45 at p. 1<sup>4</sup>; Green Mechanical Council (GMC), No. 60 at p. 5) Several comments suggested that the rule should apply to all buildings that the government leases, including buildings that the Federal agency does not have “significant control” over building design. (Kaplow, No. 6 at p. 1; U.S. Fuel Cell Council, No. 13 at p. 2; National Electrical Manufacturers Association (NEMA), No. 36 at p. 3; Solar Energy Industries Association (SEIA), No. 58 at pp. 2-3, Natural Resources Defense Council (NRDC), No. 64 at pp. 3-4; Earthjustice, No. 71 at p. 9) DOE has not expressly added the “significant control” restriction to the rule for leased buildings because the ECPA

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<sup>4</sup>Notations of this form appear throughout this document and identify statements made in written comments or at public hearings that DOE has received and has included in the docket for this rulemaking. For example, “IHS, No. 45 at p. 1” refers to a comment: (1) From Indian Health Services; (2) in document number 45 in the docket of this rulemaking; and (3) appearing on page 1 of the submission.



definition of “Federal building” includes the limitation of buildings that are built specifically for the Federal government. Construction design for a building built specifically for use of the Federal government, including under lease to a Federal agency, is, presumably, under the significant control of the Federal owner or Federal lessee. U.S. General Services Administration (GSA) recommended adding rule language stating that leased buildings include projects “in which the government initiates the solicitation of bids expressly for the construction of a building or facility to meet a Federal agency need.” (GSA, No. 72 at p. 5) DOE agrees that GSA’s proposed clarification reflects ECPA, but DOE does not believe that GSA’s language need be included in today’s rule as the rule specifies that it applies to buildings built for the purposes of being leased by a Federal agency.

### *Covered buildings*

NRDC and Earthjustice commented that DOE’s interpretation of the scope of buildings covered under statutory requirements at 42 U.S.C 6834(a)(3)(D)(i) is incorrect. (NRDC, No. 64 at p. 3; Earthjustice, No. 71 at pp. 7-9) These commenters believe that the limiting criteria in 42 U.S.C. 6834(a)(3)(D)(i)<sup>5</sup> apply only to “major renovations” and not to new buildings. DOE believes that this is an incorrect interpretation of the statute for several reasons. The first phrase set-off in commas (starting with "with respect to which") reasonably modifies the previous phrase referring to both new Federal buildings and those undergoing major renovations. The second phrase set-off in commas (starting with "in the case of public buildings") reasonably

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<sup>5</sup> Under ECPA, as amended, today’s rule applies to the following EISA-covered buildings: “new Federal buildings and Federal buildings undergoing major renovations, with respect to which the Administrator of General Services is required to transmit a prospectus to Congress under section 3307 of Title 40, in the case of public buildings (as defined in section 3301 of Title 40), or of at least \$2,500,000 in costs adjusted annually for inflation for other buildings,” (42 U.S.C. 6834(a)(3)(D)(i))

characterizes the first phrase. The third phrase (starting with "or of at least \$2,500,000") and the "or" that begins the phrase indicate that the first and second phrases are one factor to apply to the subset of buildings at issue and the third phrase is another factor to apply to this subset of buildings. Moreover, if the commenters' interpretation that the limiting factors only apply to major renovations was correct, then other sections of ECPA would be without meaning. Specifically, Congress amended ECPA and set sustainable design requirements for new Federal buildings, if life-cycle cost-effective, under EPACT 2005. (See 42 U.S.C. 6834(a)(3)(A)(i)(II)). Then, in EISA 2007, Congress amended ECPA again, to apply sustainable design requirements to a subset of new Federal buildings or major renovations, without regard to life-cycle-cost-effectiveness. (See 42 U.S.C. 6834(a)(3)(D)(i)). If the EISA 2007 amendments applied to all new Federal buildings, as commenters suggest, then the EPACT 2005 provisions would be meaningless. While Congress could have rescinded the earlier EPACT 2005 sustainable design provisions, it chose not to and, therefore, DOE's interpretation that 42 U.S.C. 6834(D)(i) only applies to a subset of Federal buildings is reasonable.

In the final rule, DOE removed the second EISA 2007 condition, "public buildings" (as defined at 40 U.S.C. 3301) for which a prospectus is required from Congress, from the scope of coverage for low-rise residential buildings. The definition of "public building" at 40 U.S.C. 3301 exempts buildings and construction projects that are on or used in connection with housing and residential projects. (See 40 U.S.C. 3301(a)(5)(C)(vi)) Therefore, EISA-covered low-rise residential buildings only include those buildings with construction costs of at least \$2.5 million.

*Compliance date of rule*

DOE received a number of comments on the compliance date proposed in the NOPR. This compliance date is consistent with the compliance date that DOE has used for baseline Federal building energy efficiency standards at 10 CFR parts 433 and 435 for several years. Under 10 CFR parts 433 and 435, “design for construction” means the stage when the energy efficiency and sustainability details (such as insulation levels, HVAC systems, water-using systems, etc.) are either explicitly determined or implicitly included in a project cost specification. Agencies that have already programmed or budgeted for building construction before the publication of today’s rule likely have not included the costs of complying with the requirements of this rule. To apply the rule to these buildings would likely impose unanticipated costs that could compromise important functional aspects of the building or agency mission. Applying the rule to buildings for which design for construction begins one year after publication of the final rule helps ensure that agencies can anticipate and incorporate the cost of meeting this rule in the construction budget or make other necessary adjustments.

### *Overseas Facilities*

Comments received on the Fossil Fuel Reduction Notice of Proposed Rulemaking (“fossil fuel reduction NOPR”) (75 FR 63404) (October 15, 2010) asked about application of the rule to overseas facilities where the agency does not have complete control over building design, and these comments are equally applicable to today’s final rule. DOE recognizes that several agencies have buildings overseas and these buildings may be subject to a variety of legal authorities specific to that agency. For example, DOD commented that an agency may not have complete control over the design of a new or renovated building or may face technical challenges

in meeting the proposed rule in overseas locations.<sup>6</sup> Today's final rule does not expressly address the extent to which it may be applicable to buildings overseas as each individual agency is best positioned to understand the various and sometimes unique authorities that may be applicable to overseas buildings of that agency. However, today's rule applies to overseas facilities to the extent the requirements are consistent with applicable law.

#### *Privatized military housing*

A public comment on a related DOE rulemaking that also proposed to amend 10 CFR Parts 433 and 435, "Fossil Fuel-Generated Energy Consumption Reduction for New Federal Buildings and Major Renovations of Federal Buildings" (75 FR 63404) (October 15, 2010), stated that DOE needed to clarify whether the rule applies to privatized military housing. EISA 2007 modified the ECPA definition of "Federal building" to apply to "any building to be constructed by, or for the use of, any Federal agency. Such term shall include buildings built for the purpose of being leased by a Federal agency, and privatized military housing." (42 U.S.C. 6832(5)) In addition, Congress again mentioned privatized military housing in EISA 2007 when it specified that, "with respect to privatized military housing, the Secretary of Defense, after consultation with the Secretary [of Energy] may, through rulemaking, develop alternative criteria to those established in subclauses (I) [fossil fuel reduction requirements] and (III) [sustainable design requirements] of clause (i)." (42 U.S.C. 6834(a)(3)(D)(vi)) With respect to EISA-covered buildings, privatized military housing may not meet the definition of "public building" at 40 U.S.C. 3301(a)(5), but privatized military housing with construction costs of at least \$2.5 million would be EISA-covered buildings.

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<sup>6</sup> DOD-N, No. 25B at p. 8, Docket No. EERE-2010-BT-STD-0031.

### *Application of \$2.5 million threshold on a per building basis*

Sunnovation encouraged DOE to clarify that multi-unit residential projects under a single contract should be considered jointly when determining whether the \$2.5 million threshold is met, as opposed to applying the \$2.5 million threshold per building. (Sunnovation, No. 28 at p. 2) The cost threshold applies on a per building basis. EISA 2007 sets requirements for “new Federal buildings and Federal buildings undergoing major renovations.” (See 42 U.S.C. 6834(a)(3)(D)(i)(I)) Nothing in the statute states that this threshold applies across multiple buildings that are part of one project.

## **B. Green Building Certification**

### *Compliance with other requirements*

DOE requested comments as to whether the minimum allowable level for green building rating systems should comply with the Guiding Principles and all applicable executive orders. 75 FR 29939. The DOI stated that “If federal buildings, however, are designed, built, and perform in accordance with legislative mandates, the Guiding Principles, and all applicable executive orders, they are inherently green buildings....Seeking an additional green building rating is redundant.” (DOI, No. 44 at p. 7) GSA commented that it should not be necessary to mandate minimum rating levels. (GSA, No. 72 at p. 12) As today’s rule explicitly states, DOE is not requiring Federal agencies to use a green building certification system. Federal agencies may wish to use a green building rating system as a tool to help them meet the Guiding

Principles or their own internal sustainability goals, although agencies are not required to use such a system. DOE encourages Federal agencies to consider GSA's 2013 recommendations when choosing a green building certification system.<sup>7</sup> DOE notes that under Executive Orders 13423 and 13514, Federal agencies are already required to ensure that new construction and major renovations of agency buildings comply with the Guiding Principles. In today's rule, DOE requires that agencies should select a green building certification system that meets the prescribed criteria and a level of certification that promotes attainment of the Guiding Principles.

#### *Independent third-party verification*

GSA said that DOE needs to clarify the concept of third-party verification of green building rating systems. (GSA, No. 72 at p. 12) DOE notes that the rule, based on the statutory requirement at 42 U.S.C. 6834(a)(3)(D)(iii), requires that the system under which the building is certified must allow assessors and auditors to independently verify the criteria and measurement metrics of the system. To independently verify the criteria and measurement metrics, assessors and auditors must be free from bias (financial or otherwise) when they evaluate a building for compliance with a green rating system. Federal agencies seeking certification from a green building rating system cannot assert that assessors and auditors employed by the agency are independent. DOE notes that Federal agencies that use a green building rating system do not have to use assessors and auditors, but must ensure that the green building rating system that it chooses allows for independent verification from assessors and auditors.

#### *Choosing a green building certification system*

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<sup>7</sup> Letter and all supporting material may be found on GSA's website at <http://www.gsa.gov/portal/content/131983>.

As required by Section 436(h) of EISA 2007, in 2008 GSA identified LEED Silver as a green rating system and level that meets the criteria expressly identified in the statute. DOE requested comment on other green rating systems and associated levels/points that also would meet the statutory criteria. 75 FR 29939. Subsequently, on October 25, 2013, GSA recommended that Federal agencies achieve at least a Silver rating from LEED or 2 Green Globes from the Green Building Initiative for new construction and/or major renovations in order to meet the statutory criteria.<sup>8</sup>

GBI asked that DOE recognize GBI's Green Globes as a certification system that meets all of the criteria called for in the NOPR, noting that Federal agencies should achieve Two Green Globes for compliance with the rule. (GBI, No. 25 at p. 7) There were many comments expressing support for the Green Globes rating system. (Duro-Last Roofing, No. 3 at p. 1; Arch Wood Protection, No. 7 at p. 1; Plastic Pipe and Fitting Association, No. 9 at p. 2; Iowa Department of Public Safety, No. 18 at p. 2; the FVA, No. 21 at p. 1; the NACGB, No. 24 at p. 3; the Sustainable Forest Initiative, No. 26 at pp. 1-2, the Hardwood Foundation, No. 27 at p. 4, The Sika Corporation, No. 42 at p. 1; Greenguard Environmental Institute, No. 46 at p. 5; the Sustainable Forestry Initiative, No. 52 at p. 2; AF&PA/AWC, No. 59 at p. 6; the American Forest Foundation, No. 61 at p. 3; and the RFCI, No. 63 at p. 7) Many of the supporters of Green Globes stressed that the system was ANSI-certified and considered ANSI certification to be important. DOE is aware that neither Green Globes nor LEED is an ANSI-certified system. Also, as GSA noted in its review of the main commercial green building rating systems, neither

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<sup>8</sup> Letter from Daniel Tangherlini, GSA Administrator, to Ernest Moniz, Secretary of Energy, dated October 25, 2013.

system fully aligned with Federal sustainable building requirements.

Others recommended that the LEED system be approved for use in Federal buildings. (USGBC, No. 60 at p. 8; Stuart D. Kaplow, No. 6 at p. 2; GSA Region 8, No. 33 at p. 4; Iowa Department of Public Safety, No. 18 at p. 1; NEMA, No. 36 at p. 6; IHS, No. 45 at p. 3; Greenguard Environmental Institute, No. 46 at p. 5; SEIU, No. 67 at p. 2; GSA, No. 72 at p. 14) Weyerhaeuser opposed the endorsement of LEED, mentioning LEED is not ANSI-certified. (Weyerhaeuser, No. 62 at p. 4) A substantial number of comments addressing forestry and wood certification considerations expressed opposition to how the USGBC LEED rating system addresses certified wood products and questioned whether LEED is developed via a consensus-based process. (AWC No. 22 at p. 4; SFI, No. 26 at p. 2; Hardwood Federation No. 51 at p. 2; AF&PA/AWC, No. 59 at p. 8; the American Forest Foundation, No. 61 at p. 3; Weyerhaeuser, No. 62 at pp. 3-4) LEED is not developed by the Federal government and, therefore, DOE cannot comment on the content of their rating system. The National Park Service recommended allowing other rating systems to be used, not just the USGBC LEED system. (NPS, No. 20 at p. 1)

NEMA advocated that a separate energy specific rating system such as ENERGY STAR Buildings be mandated. (NEMA, No. 36 at p. 6) The Sustainable Forestry Initiative expressed support for Built Green Canada. (SFI, No. 52 at p. 2) ASHRAE suggested that ASHRAE's Building Energy Quotient (Building EQ) labeling program may meet DOE's green building certification needs. (ASHRAE, No. 30 at p. 6) AGA expressed support for Green Globes, LEED, and Building EQ, the International Green Construction Code, and ASHRAE Standard



189.1-2009. (AGA, No. 50 at p. 2)

For residential buildings, a number of commenters expressed support for the NAHB and ICC's National Green Building Standard ICC-700-2008. (Plastic Pipe and Fittings Association, No. 9 at p. 2; ICC, No. 31 at p. 2; IHS, No. 45 at p. 3, Sustainable Forest Initiative, No. 52 at p. 2; NAHB, No. 55 at p. 2, and the RFCI, No. 63 at p. 5)

DOE received numerous comments opposing and numerous comments supporting DOE choosing one or several green building certification systems that meet the requirements in the sustainable design NOPR. The Society of the Plastics Industry and several other commenters expressed support for allowing flexibility for agencies in choosing a green building rating system. (SPI, No. 38 at p. 1) Many public comments from supporters of Green Globes commended this approach because it allows agencies options for using systems tailored to their needs. (AWC, No. 22 at p. 3; The Vinyl Institute, No. 23 at p. 1; NACGB, No. 24 at p. 2; Sustainable Forest Initiative, No. 26 at p. 2) . Several commenters, including the RFCI and the NACGB, recommended that DOE determine which green rating systems are acceptable for use for Federal buildings. (RFCI, No. 63 at p. 10; NACGB, No. 65 at p. 6)

DOE is not approving by this rule any specific green building rating systems for use in new Federal buildings and major renovations. Instead, DOE is specifying in regulation criteria for determining acceptable green building rating systems to allow agencies flexibility in choosing a rating system, including the possibility of using new or improved rating systems that are not currently available or known. In this way, DOE is allowing Federal agencies to use the

system most appropriate for their buildings. Any rating system complying with the criteria outlined in today's rule shall be permitted. DOE also encourages Federal agencies to consider GSA's 2013 green building certification system recommendations. In addition, after the GSA Office of High Performance Green Federal Buildings completes its next analysis of green rating systems as required by EISA 2007 Section 436(h), DOE will review GSA's results and may seek to amend the criteria established in today's rule.

One commenter asked what is meant by the phrase "consensus process" in the rule. (Myers, No. 53 at p 2) For purposes of today's rule, DOE clarifies that a "consensus-based" process is a group decision-making process that seeks not only the agreement of most participants, but also the resolution or mitigation of minority objections.

NEMA recommended that DOE consider the use of existing certification systems that address occupied buildings and make any additional criteria of importance known to the certification bodies. (NEMA, No. 36 at p. 6) NAVFAC stated DOE should provide additional alternatives for verifying post-occupancy the continued energy and environmental performance of new and renovated buildings. (NAVFAC, No. 47 at p. 8) The final rule requires that the certification system include a verification system to demonstrate continued energy and water savings at least every four years after initial occupancy. Requiring the demonstration every four years will make the frequency consistent with other Federal building audit cycles such as the energy and water evaluations required under EISA Section 432.

*Internal certification process*

ECPA gives DOE the option of including a section in the rulemaking that would permit Federal agencies to develop internal green building certification processes to rate their buildings. (42 U.S.C. 6834(a)(3)(D)(v)) The NOPR proposed allowing agencies to request DOE approval of internal green building certification processes. GSA commented that agencies should not be allowed to self-certify buildings through an internal green building certification process. (GSA, No. 72 at p. 12) DOI asked for clarification regarding whether the DOI Sustainable Building Assessment and Compliance Tool or the ENERGY STAR Portfolio Manager are considered internal green building rating systems. (DOI, No. 44 at p. 6) In the final rule, DOE has not included provisions on internal green building rating systems as contained in the proposed rule because DOE's decision to allow agencies to use any green building rating system that meets the criteria in today's rule makes this provision unnecessary. In addition, regardless of any regulatory text, under today's rule, Federal agencies that choose not to use green building rating system, such as LEED or Green Globes, can use any appropriate, internal system to ensure that any new Federal buildings or major renovations of Federal buildings meet the requirements in today's rule.

#### *Effect on state and local governments*

NAHB expressed concern that "today's mandates for federal buildings will morph into requirements for private development" because many state and local governments shadow Federal rulemakings. (NAHB, no. 55 at p. 5) DOE notes NAHB's concern, but the Federal government has a statutory obligation to lead by example. (See 42 U.S.C. 6831) State and local

governments and private entities have no obligation to adopt any elements of today's rule.

### *Codifying EISA life-cycle limit*

Additionally, today's final rule amends the life-cycle analysis provisions established in 10 CFR part 436 subpart A. Section 544 of the National Energy Conservation Policy Act (NECPA) directed DOE to establish practical and effective present value methods for estimating and comparing life-cycle costs for Federal buildings, based on capital and operating costs during a period of the expected life of the building's energy system or 25 years, whichever is shorter. DOE established life-cycle cost analyses methodologies and procedures in 10 CFR part 436 subpart A. Section 441 of EISA 2007 amended section 544 of NECPA by replacing the 25 year limit with a 40 year limit. (See, 42 U.S.C. 8254(a)(1)) Today's final rule amends the life-cycle costs analyses regulations to reflect the statutory change. Because the amendment to part 436 involves a nondiscretionary changes, the Department finds that public notice and comment are unnecessary pursuant to 5 U.S.C. 553(b)(B).

## **III. Regulatory Analyses**

### **A. Review under Executive Order 12866 and 13563**

Today's final rule is a "significant regulatory action" under Executive Order 12866, "Regulatory Planning and Review." 58 FR 51735 (October 4, 1993). Accordingly, today's action was subject to review by the Office of Information and Regulatory Affairs in the Office of Management and Budget (OMB). OMB has completed its review. DOE has also reviewed this

regulation pursuant to Executive Order 13563, issued on January 18, 2011. 76 FR 3281 (January 21, 2011). EO 13563 is supplemental to and explicitly reaffirms the principles, structures, and definitions governing regulatory review established in Executive Order 12866.

DOE expects that Federal building construction costs will increase as a result of this rule and the cost increase will vary from project to project. A 2004 study commissioned by GSA entitled *GSA LEED Cost Study* estimates that a Gold certification under the LEED rating system will increase the cost of a mid-rise Federal courthouse or office building by 1.4% to 8.1%.<sup>9</sup>

Given that green building certification for Federal buildings is voluntary, DOE can only make assumptions about the amount of Federal agency participation and costs that such a certification might entail. The cost impact for any building will vary depending upon the level of green building certification being pursued, the square footage of the building and the degree of service the agency expects from a certification body such as LEED or Green Globes in order to review the design of the building. Existing Federal requirements mandate that construction of new Federal buildings be at a level of performance that meets the current ASHRAE or IECC specification, or 30% beyond the current ASHRAE or IECC specification, if life-cycle cost effective. Any added costs incurred associated with this rulemaking due to the agency voluntarily certifying that building as meeting a green building rating system will likely be as a result of the process of seeking and obtaining that certification.

#### B. Review under the Regulatory Flexibility Act

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9. See <https://www.wbdg.org/ccb/GSAMAN/gsaleed.pdf>.

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires the preparation of an initial regulatory flexibility analysis for any rule that by law must be proposed for public comment, unless the agency certifies that the rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. As required by Executive Order 13272, *Proper Consideration of Small Entities in Agency Rulemaking*, 67 FR 53461 (August 16, 2002), DOE published procedures and policies on February 19, 2003, to ensure that the potential impacts of its rules on small entities are properly considered during the rulemaking process (68 FR 7990). The Department has made its procedures and policies available on the Office of General Counsel's website: <http://www.gc.doe.gov>.

DOE has reviewed today's rule under the provisions of the Regulatory Flexibility Act and the procedures and policies published on February 19, 2003. Today's rulemaking applies only to the design and construction of new Federal buildings and major renovation to Federal buildings. As such, the only entities directly regulated by this rulemaking would be Federal agencies. DOE does not believe that there will be any impacts on small entities such as small businesses, small organizations, or small governmental jurisdictions.

On the basis of the foregoing, DOE certified that the proposed rule would not have a significant economic impact on a substantial number of small entities. DOE received no comments on the impact of the proposed rule on small entities. As a result, DOE has adopted the prior certification without change.

#### C. Review under the Paperwork Reduction Act of 1995

This rulemaking will impose no new information or record keeping requirements. Accordingly, Office of Management and Budget (OMB) clearance is not required under the Paperwork Reduction Act. (44 U.S.C. 3501 *et seq.*)

D. Review under the National Environmental Policy Act of 1969

DOE prepared an Environmental Assessment (EA) entitled, 10 CFR 433, “Energy Efficiency Standards for the Design and Construction of New Federal Commercial and Multi-Family High-Rise Residential Buildings” and 10 CFR 435, “Energy Efficiency Standards for the Design and Construction of New Federal Residential Low-Rise Residential Buildings” pursuant to the Council on Environmental Quality’s (CEQ) Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR parts 1500-1508), the National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. 4321 *et seq.*), and DOE’s NEPA Implementing Procedures (10 CFR part 1021).

The EA addresses the possible environmental effects attributable to the implementation of the final rule. Under today’s rule, if an agency chooses to use a green building certification system to certify its buildings for any purpose, the chosen green building certification system must meet certain criteria established by the rule. The rule is not expected to cause any adverse health effects, and thus would have no environmental justice impacts affecting low-income or minority populations. The rule would not have an adverse effect on historic or archaeological sites, and would not be affected by a terrorist act. The rule will have no significant impact on

sensitive environmental resources, including wetlands/floodplains, prime agricultural lands, endangered species, and sensitive ecosystems. Therefore, DOE has issued a Finding of No Significant Impact (FONSI), pursuant to NEPA, the regulations of the Council on Environmental Quality (40 CFR parts 1500–1508), and DOE’s regulations for compliance with NEPA (10 CFR part 1021).

E. Review under Executive Order 13132, “Federalism”

Executive Order 13132, “Federalism,” 64 FR 43255 (August 4, 1999), imposes certain requirements on agencies formulating and implementing policies or regulations that preempt State law or that have federalism implications. The Executive Order requires agencies to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and to carefully assess the necessity for such actions. The Executive Order also requires agencies to have an accountable process to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications. On March 14, 2000, DOE published a statement of policy describing the intergovernmental consultation process it will follow in the development of such regulations. (65 FR 13735) DOE examined this rule and determined that it does not preempt State law and does not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of Government. No further action is required by Executive Order 13132.

F. Review under Executive Order 12988, “Civil Justice Reform”



With respect to the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, "Civil Justice Reform," 61 FR 4729 (February 7, 1996), imposes on Federal agencies the general duty to adhere to the following requirements: (1) eliminate drafting errors and ambiguity; (2) write regulations to minimize litigation; and (3) provide a clear legal standard for affected conduct, rather than a general standard and promote simplification and burden reduction. Section 3(b) of Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) clearly specifies the preemptive effect, if any; (2) clearly specifies any effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct, while promoting simplification and burden reduction; (4) specifies the retroactive effect, if any; (5) adequately defines key terms; and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires Executive agencies to review regulations in light of applicable standards in section 3(a) and section 3(b) to determine whether they are met or it is unreasonable to meet one or more of them. DOE has completed the required review and determined that, to the extent permitted by law, this rule meets the relevant standards of Executive Order 12988.

G. Review under the Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA) (Pub. L. 104-4) requires each Federal agency to assess the effects of Federal regulatory actions on State, local, and tribal governments and the private sector. For a proposed regulatory action likely to result in a rule

that may cause the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector of \$100 million or more in any one year (adjusted annually for inflation), section 202 of UMRA requires a Federal agency to publish a written statement that estimates the resulting costs, benefits, and other effects on the national economy. (2 U.S.C. 1532(a) and (b))

The UMRA also requires a Federal agency to develop an effective process to permit timely input by elected officers of State, local, and tribal governments on a proposed “significant intergovernmental mandate,” and requires an agency plan for giving notice and opportunity for timely input to potentially affected small governments before establishing any requirements that might significantly or uniquely affect small governments. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA (62 FR 12820) (also available at <http://www.gc.doe.gov>). This final rule contains neither an intergovernmental mandate nor a mandate that may result in the expenditure of \$100 million or more in any year by State, local, and tribal governments, in the aggregate, or by the private sector so these requirements under the Unfunded Mandates Reform Act do not apply.

#### H. Review under the Treasury and General Government Appropriations Act of 1999

Section 654 of the Treasury and General Government Appropriations Act of 1999 (Pub. L. 105-277) requires Federal agencies to issue a Family Policymaking Assessment for any rule that may affect family well-being. This final rule would not have any impact on the autonomy or integrity of the family as an institution. Accordingly, DOE has concluded that it is not necessary to prepare a Family Policymaking Assessment.

I. Review under Executive Order 12630, "Governmental Actions and Interference with Constitutionally Protected Property Rights"

The Department has determined, under Executive Order 12630, “Governmental Actions and Interference with Constitutionally Protected Property Rights,” 53 FR 8859 (March 18, 1988), that this rule would not result in any takings which might require compensation under the Fifth Amendment to the United States Constitution.

J. Review under the Treasury and General Government Appropriations Act, 2001

Section 515 of the Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516, note) provides for agencies to review most disseminations of information to the public under guidelines established by each agency pursuant to general guidelines issued by OMB. OMB's guidelines were published at 67 FR 8452 (February 22, 2002), and DOE's guidelines were published at 67 FR 62446 (October 7, 2002). DOE has reviewed today's final rule under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

K. Review under Executive Order 13211, “Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use”

Executive Order 13211, “Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use,” 66 FR 28355 (May 22, 2001), requires Federal agencies to

prepare and submit to the Office of Information and Regulatory Affairs (OIRA), Office of Management and Budget, a Statement of Energy Effects for any proposed significant energy action. A “significant energy action” is defined as any action by an agency that promulgated or is expected to lead to promulgation of a final rule, and that: (1) is a significant regulatory action under Executive Order 12866, or any successor order; and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy, or (3) is designated by the Administrator of OIRA as a significant energy action. For any proposed significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use should the proposal be implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use. This final rule would not have a significant adverse effect on the supply, distribution, or use of energy and, therefore, is not a significant energy action. Accordingly, DOE has not prepared a Statement of Energy Effects.

#### **IV . Congressional Notification**

As required by 5 U.S.C. 801, DOE will report to Congress on the promulgation of this rule prior to its effective date. The report will state that it has been determined that the rule is not a “major rule” as defined by 5 U.S.C. 804(2).

## **List of Subjects**

### **10 CFR Parts 433 and 435**

Buildings and facilities, Energy conservation, Engineers, Federal buildings and facilities, Housing, Incorporation by reference, Sustainable design.

### **10 CFR Part 436**

Energy conservation, Federal buildings and facilities, Reporting and recordkeeping, Requirements, Solar energy.

Issued in Washington, DC, on October 3, 2014.

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David T. Danielson,  
Assistant Secretary,  
Energy Efficiency and Renewable Energy.

For the reasons set out in the preamble, the Department of Energy amends chapter II of title 10 of the Code of Federal Regulations as set forth below:

**PART 433 -- ENERGY EFFICIENCY STANDARDS FOR THE DESIGN AND CONSTRUCTION OF NEW FEDERAL COMMERCIAL AND MULTI-FAMILY HIGH-RISE RESIDENTIAL BUILDINGS**

1. The authority citation for part 433 continues to read as follows:

**Authority:** 42 U.S.C. 6831-6832, 6834-6835; 42 U.S.C. 7101 et seq.

2. Revise the part heading for part 433 as set forth above.

3. In § 433.1:

- a. Redesignate the existing text as paragraph (a);
- b. Add and reserve paragraph (b); and
- c. Add paragraph (c) to read as follows:

**§ 433.1 Purpose and scope.**

\* \* \* \* \*

(c) This part also establishes green building certification requirements for new Federal buildings that are commercial and multi-family high-rise residential buildings and major renovations to Federal buildings that are commercial and multi-family high-rise residential buildings, for which

design for construction began on or after October 14, 2015.

**§ 433.3 [Amended]**

4. In § 433.3 in paragraphs (b)(1), (b)(2) and (b)(3) remove “433.4, 433.5” and add in their place “433.100, and 433.101.”

**§§ 433.4 through 433.7 [Removed and Reserved]**

5. Remove and reserve §§ 433.4 through 433.7.

6. Add subpart A to part 433 to read as follows:

**Subpart A - - Energy Efficiency Performance**

Sec.

433.100 Energy efficiency performance standard.

433.101 Performance level determination.

**Subpart A - - Energy Efficiency Performance**

**§433.100 Energy efficiency performance standard.**

(a) (1) All Federal agencies shall design new Federal buildings that are commercial and multi-family high-rise residential buildings, for which design for construction began on or after January 3, 2007, but before August 10, 2012, to:

(i) Meet ASHRAE 90.1-2004, (incorporated by reference, see § 433.3); and

(ii) If life-cycle cost-effective, achieve energy consumption levels, calculated consistent with paragraph (b) of this section, that are at least 30 percent below the levels of the ASHRAE Baseline Building 2004.

(2) All Federal agencies shall design new Federal buildings that are commercial and multi-family high-rise residential buildings, for which design for construction began on or after August 10, 2012, to:

(i) Meet ASHRAE 90.1-2007, (incorporated by reference, see § 433.3); and

(ii) If life-cycle cost-effective, achieve energy consumption levels, calculated consistent with paragraph (b) of this section, that are at least 30 percent below the levels of the ASHRAE Baseline Building 2007.

(3) All Federal agencies shall design new Federal buildings that are commercial and multi-family high-rise residential buildings, for which design for construction began on or after July 9, 2014, to:

(i) Meet ASHRAE 90.1-2010, (incorporated by reference, see § 433.3); and

(ii) If life-cycle cost-effective, achieve energy consumption levels, calculated consistent with paragraph (b) of this section, that are at least 30 percent below the levels of the ASHRAE Baseline Building 2010.



(b) Energy consumption for the purposes of calculating the 30 percent savings shall include space heating, space cooling, ventilation, service water heating, lighting and all other energy consuming systems normally specified as part of the building design except for receptacle and process loads.

(c) If a 30 percent reduction is not life-cycle cost-effective, the design of the proposed building shall be modified so as to achieve an energy consumption level at or better than the maximum level of energy efficiency that is life-cycle cost-effective, but at a minimum complies with paragraph (a) of this section.

**§433.101 Performance level determination.**

(a) (1) For Federal buildings for which design for construction began on or after January 3, 2007, but before August 10, 2012, each Federal agency shall determine energy consumption levels for both the ASHRAE Baseline Building 2004 and proposed building by using the Performance Rating Method found in Appendix G of ASHRAE 90.1-2004 (incorporated by reference, see § 433.3), except the formula for calculating the Performance Rating in paragraph G1.2 shall read as follows:

(i)  $\text{Percentage improvement} = 100 \times ((\text{Baseline building consumption} - \text{Receptacle and process loads}) - (\text{Proposed building consumption} - \text{Receptacle and process loads})) / (\text{Baseline building consumption} - \text{Receptacle and process loads})$  (which simplifies as follows):

(ii)  $\text{Percentage improvement} = 100 \times (\text{Baseline building consumption} - \text{Proposed building consumption}) / (\text{Baseline building consumption} - \text{Receptacle and process loads})$ .

(2) For Federal buildings for which design for construction began on or after August 10, 2012, each Federal agency shall determine energy consumption levels for both the ASHRAE Baseline Building 2007 and proposed building by using the Performance Rating Method found in Appendix G of ASHRAE 90.1-2007 (incorporated by reference, see § 433.3), except the formula for calculating the Performance Rating in paragraph G1.2 shall read as follows:

(i) Percentage improvement =  $100 \times ((\text{Baseline building consumption} - \text{Receptacle and process loads}) - (\text{Proposed building consumption} - \text{Receptacle and process loads})) / (\text{Baseline building consumption} - \text{Receptacle and process loads})$  (which simplifies as follows):

(ii) Percentage improvement =  $100 \times (\text{Baseline building consumption} - \text{Proposed building consumption}) / (\text{Baseline building consumption} - \text{Receptacle and process loads})$ .

(3) For Federal buildings for which design for construction began on or after July 9, 2014, each Federal agency shall determine energy consumption levels for both the ASHRAE Baseline Building 2007 and proposed building by using the Performance Rating Method found in Appendix G of ASHRAE 90.1-2010 (incorporated by reference, see § 433.3), except the formula for calculating the Performance Rating in paragraph G1.2 shall read as follows:

(i) Percentage improvement =  $100 \times ((\text{Baseline building consumption} - \text{Receptacle and process loads}) - (\text{Proposed building consumption} - \text{Receptacle and process loads})) / (\text{Baseline building consumption} - \text{Receptacle and process loads})$  (which simplifies as follows):

(ii) Percentage improvement =  $100 \times (\text{Baseline building consumption} - \text{Proposed building consumption}) / (\text{Baseline building consumption} - \text{Receptacle and process loads})$ .

(b) Each Federal agency shall consider laboratory fume hoods and kitchen ventilation systems as part of the ASHRAE-covered HVAC loads subject to the 30 percent savings requirements, rather than as process loads.

7. Add and reserve subpart B to part 433 to read as follows:

**Subpart B - - Reduction in Fossil Fuel-Generated Energy Consumption [Reserved]**

8. Add subpart C to part 433 to read as follows:

**Subpart C – Green Building Certification for Federal Buildings**

**§ 433.300 Green building certification.**

- (a) If a Federal agency chooses to use a green building certification system to certify a new Federal building or a Federal building undergoing a major renovation and such building is also either a public building (as defined in 40 U.S.C. 3301) for which transmittal of a prospectus to Congress is required under 40 U.S.C. 3307, or a Federal building for which estimated new building or major renovation design and construction costs are at least \$2,500,000 (in 2007 dollars, adjusted for inflation), and design for construction began on or after October 14, 2015.
- (b) The system under which the building is certified must:

- (1) Allow assessors and auditors to independently verify the criteria and measurement metrics of the system;
- (2) Be developed by a certification organization that:
  - (i) Provides an opportunity for public comment on the system; and
  - (ii) Provides an opportunity for development and revision of the system through a consensus-based process;
- (3) Be nationally recognized within the building industry;
- (4) Be subject to periodic evaluation and assessment of the environmental and energy benefits that result under the rating system; and
- (5) Include a verification system for post-occupancy assessment of the rated buildings to demonstrate continued energy and water savings at least every four years after initial occupancy.

(c) Certification level. The building must be certified to a level that promotes the high performance sustainable building guidelines referenced in Executive Order 13423 “Strengthening Federal Environmental, Energy, and Transportation Management” and Executive Order 13514 “Federal Leadership in Environmental, Energy and Economic Performance.”

**PART 435 -- ENERGY EFFICIENCY STANDARDS FOR THE DESIGN AND  
CONSTRUCTION OF NEW FEDERAL LOW-RISE RESIDENTIAL BUILDINGS**

9. The authority citation for part 435 continues to read as follows:

**Authority:** 42 U.S.C. 6831-6832, 6834-6835; 42 U.S.C. 7101 et seq.

10. The heading for part 435 is revised to read as set forth above.

11. In § 435.1:

- a. Redesignate the existing text as paragraph (a);
- b. Add and reserve paragraph (b); and
- c. Add paragraph (c) to read as follows:

**§ 435.1 Purpose and scope.**

\* \* \* \* \*

(c) This part also establishes green building certification requirements for new Federal buildings that are low-rise residential buildings and major renovations to Federal buildings that are low-rise residential buildings, for which design for construction began on or after October 14, 2015.

**§§ 435.6 and 435.7 [Removed]**

12. Remove §§ 435.6 and 435.7.

**§435.8 [Redesignated as § 435.6]**

13. Section 435.8 is redesignated as §435.6.

**Subparts B and C of Part 435 [Redesignated]**

14. Redesignate subparts B and C of part 435 as subparts D and E of part 435.

15. Redesignate §§ 435.300 through 435.306 as §§ 435.500 through 435.506 respectively.

16. Add and reserve a new subpart B to read as follows:

**Subpart B – Reduction in Fossil Fuel-Generated Energy Consumption [Reserved]**

17. Add a new subpart C to read as follows:

**Subpart C – Green Building Certification for Federal Buildings**

**§ 435.300 Green building certification.**

(a) If a Federal agency chooses to use a green building certification system to certify a new Federal building or a Federal building undergoing a major renovation and construction costs for such new building or major renovation are at least \$2,500,000 (in 2007 dollars, adjusted for inflation), and design for construction began on or after October 14, 2015:

(b) The system under which the building is certified must:

(1) Allow assessors and auditors to independently verify the criteria and measurement metrics of the system;

(2) Be developed by a certification organization that

(i) Provides an opportunity for public comment on the system; and

(ii) Provides an opportunity for development and revision of the system through a consensus-based process;

(3) Be nationally recognized within the building industry;

(4) Be subject to periodic evaluation and assessment of the environmental and energy benefits that result under the rating system; and

(5) Include a verification system for post occupancy assessment of the rated buildings to demonstrate continued energy and water savings at least every four years after initial occupancy.

(c) Certification level. The building must be certified to a level that promotes the high performance sustainable building guidelines referenced in Executive Order 13423

“Strengthening Federal Environmental, Energy, and Transportation Management” and Executive Order 13514 “Federal Leadership in Environmental, Energy and Economic Performance.”

## **PART 436 – FEDERAL ENERGY MANAGEMENT AND PLANNING PROGRAMS**

18. The authority citation for part 436 is revised to read as follows:

**Authority:** 42 U.S.C. 7101 et seq.; 42 U.S.C. 8254; 42 U.S.C. 8258; 42 U.S.C. 8259b.

### **Subpart A – Methodology and Procedures for Life Cycle Cost Analyses**

19. Revise §436.14(d) to read as follows:

#### **§436.14 Methodological assumptions.**

\* \* \* \* \*

(d) Each Federal agency shall assume that the appropriate study period is as follows:

(1) For evaluating and ranking alternative retrofits for an existing Federal building, the study period is the expected life of the retrofit, or 40 years from the beginning of beneficial use, whichever is shorter.

(2) For determining the life cycle costs or net savings of mutually exclusive alternatives for a given building energy system or building water system (e.g., alternative designs for a particular system or size of a new or retrofit building energy system or building water system), a uniform study period for all alternatives shall be assumed which is equal to --



(i) The estimated life of the mutually exclusive alternative having the longest life, not to exceed 40 years from the beginning of beneficial use with appropriate replacement and salvage values for each of the other alternatives; or

(ii) The lowest common multiple of the expected lives of the alternative, not to exceed 40 from the beginning of beneficial use with appropriate replacement and salvage values for each alternative.

(3) For evaluating alternative designs for a new Federal building, the study period extends from the base year through the expected life of the building or 40 years from the beginning of beneficial use, whichever is shorter.

\* \* \* \* \*

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